

AMENDMENTS IN THE CLAIMS:

1. (Currently Amended) A method of bonding an optical fiber having a coating to a metallic element using a glass fixative preform having a low melting point of less than 480°C, the method comprising the steps of:

positioning a glass preform immediately adjacent to an end of the optical fiber and the metallic element, the coating having been removed from said end; and

inducing current flows in the metallic element in the region of the preform to generate sufficient heat to melt the preform whilst not melting the adjacent coating of the optical fiber, and to thereby form a bond between the optical fibre and the metallic element.

2-4. (Canceled)

5. (Previously Presented) A method as claimed in Claim 1, wherein, in the step of heating the preform, an induction heater is positioned in the vicinity of the bond so as to cause induction currents to flow in the metallic element which melt the preform.

6. (Canceled)

7. (Currently Amended) A method of bonding an optical fiber to a metallic element using a glass fixative preform having a low melting point of less than 480°C, the method comprising the steps of:

positioning a glass preform immediately adjacent to an end of the optical fiber and the metallic element, the coating having been removed from said end; and

inducing current flows in the metallic element in the region of the preform to generate sufficient heat to melt the preform whilst not melting the adjacent coating of the optical fiber, to thereby form a bond between the optical fibre and the metallic element ~~method as claimed in Claim 1~~, further including the step of removing non-

bonding coating material from the surface of the optical fiber to expose a portion of the optical fiber to be bonded.

8. (Currently Amended) A method of bonding an optical fiber to a metallic element using a glass fixative preform, the method comprising the steps of:

positioning a glass preform immediately adjacent to the optical fiber and the metallic element; and

inducing current flows in the metallic element in the region of the preform to generate sufficient heat to melt the preform and to thereby form a bond between the optical fibre and the metallic element ~~method as claimed in Claim 4~~, wherein, in the step of heating the preform, the preform is heated to a temperature in the range 280°C to 480°C.

9. (Currently Amended) A method of bonding an optical fiber to a metallic element using a glass fixative preform, the method comprising the steps of:

positioning a glass preform immediately adjacent to the optical fiber and the metallic element; and

inducing current flows in the metallic element in the region of the preform to generate sufficient heat to melt the preform and to thereby form a bond between the optical fibre and the metallic element ~~method as claimed in Claim 4~~, wherein, in the step of heating the preform, the preform is heated to a temperature in the range 320°C to 370°C.

10-34. (Canceled)

35. (Currently Amended) A structure comprising a bond formed between an optical fibre and a metallic element with a glass fixative, the bond having been formed by positioning a glass preform adjacent the optical fibre and the metallic element and inducing current flows in the metallic element to generate sufficient heat to melt the

perform bond as claimed in Claim 28, wherein the glass fixative composition includes all of the following: PbO; PbF₂; Nb₂O₅; CuO; Bi₂O₃; Fe₂O₃; ZnO; TiO₂; Al₂O₃; B₂O₃; SiO₂; and CaO.

36. (Currently Amended) A structure comprising a bond formed between an optical fibre and a metallic element with a glass fixative, the bond having been formed by positioning a glass preform adjacent the optical fibre and the metallic element and inducing current flows in the metallic element to generate sufficient heat to melt the preform bond as claimed in Claim 28, wherein the glass fixative composition includes the following constituents in the following proportions:

PbO 60%wt to 65%wt; PbF₂ 2%wt to 5%wt; Nb₂O₅ 2%wt to 5%wt; CuO 0.5%wt to 1.5%wt; Bi₂O₃ 6%wt to 7%wt; Fe₂O₃ 2%wt to 3%wt; ZnO 2%wt to 3%wt; TiO₂ 5%wt to 7%wt; Al₂O₃ 0.1%wt to 0.3%wt; B₂O₃ 2%wt to 3%wt; SiO₂ 0.1%wt to 0.4%wt; CaO 1% to 1.5%wt.

37-38. (Canceled)